



Technical Report

**TRAINING COURSE  
ON  
Adoption and Impact Assessment of Water Policies**

22 – 26 May, 2016

Amman, Jordan

Organized by  
**International Center for Agricultural Research in the Dry Areas (ICARDA)**

Under the support of  
**Japan International Cooperation Agency (JICA)**  
and  
**Arab Fund for Economic and Social Development (AFESD)**



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## EXECUTIVE SUMMARY

### **Name of the project**

Capacity development in agriculture and water management for Iraq and Regional countries

### **Partners**

Japan International Cooperation Agency (JICA)  
Arab Fund for Economic and Social Development (AFESD)  
International Center for Agricultural Research in the Dry Areas (ICARDA)

### **Purpose**

To enhance Capacity Development of government officials and researchers who are engaged in agricultural development in Iraq and other countries.

### **Specific objectives of the training course on Seed Health Testing**

Up-to-date knowledge and enhanced capacity on best practice for adoption and Impact assessment of water policies.

### **Specific outputs**

Nine professionally-trained National Agricultural Research Systems (NARS) partners from Iraq, two from Jordan and six from other countries: one from Lebanon, one from Palestine, one from Egypt, one from Yemen, and two from Tunisia have improved knowledge in adoption and impact assessment of water policies with an emphasis on dryland agriculture. While nine Iraqis, two Jordanian, one Lebanese and one Egyptian were funded by JICA, the others were sponsored by Arab Fund for Economic and Social Development (AFESD).

### **Specific outcomes**

Design, implement, manage, analyze and report on research and development in adoption and impact assessment of water policies and acquire up-to-date information on research and practical activities in impact assessment in each participating country.

## GENERAL OVERVIEW

Managing water scarcity is one of the major international challenges, particularly in the Middle East & North Africa (MENA) region. Governments show an increasing demand for developing and implementing broad policies to deal with the limited amounts of fresh water resources in their countries. The administrative structures of both drinking water and irrigation systems are characterized by weak governance and incoherent water laws.

The general perception is that governance in the MENA water sector is under a multi-dimensional pressure of paradigms and crucial changes. In addition, water policies and regulations continue to suffer from an important implementation gap. Under these conditions, capacity building has the potential to help policy-makers inside and outside the governments to assess long- and short-term impacts of water policies, programmes and activities; and then to get the best out of the strengths of players in water management processes (governance, management and allocation). This requires effective and efficient water management, access to water saving technologies, access to safe drinking water and sustainable development of the economic sectors.

As within the planned activities in the framework of **ICARDA-JICA** training program activities targeting Iraq, a training course on “**Adoption and Impact Assessment of Water Policies**” was delivered to Iraqi researchers with the participation of trainees from other West Asia and North African Countries (WANA) from Tunisia, Egypt, Jordan, Lebanon and Yemen.

This training was designed in order to help manage these complex challenges through understanding and analyzing the following issues:

- Analyse the role of policies and institutions in order to improve water governance;
- Assess the linkages of policies and institutions of the water sector with other sectors;
- Identify key implications;
- Understanding water policies (integrating gender) and their effective implementation;
- Assessing and measuring water policies impacts;
- Comprehend how agricultural policies affect water management;
- Thoughts on innovation systems and research to business approaches (water saving technologies);
- Develop water policy and management strategy (poverty alleviation, food security, NRM);

ICARDA is considered a valued partner for countries with sub-tropical dry areas, and particularly MENA countries to formulate integrated water management policies. This course offers a comprehensive training programme to cover precisely this by building upon and sharing the expertise and experience of ICARDA and the participants to training activities. Over one week, the course provides the participants from MENA countries with the knowledge and skills necessary to engage in the measurements of impacts of water policies and assessment of their adoption (constraints and opportunities) towards more sustainable livelihoods and productive, efficient, and sustainable agriculture sector. The course offers the opportunity to create a viable network between the leading training institutions (ICARDA and JICA) and the participants and provide those attendees with key personal skills to use this network to effectively manage their interests on water management, water policies analysis, important considerations for water policies formulation, adoption and impact assessment of these policies.

## **PURPOSE**

The purpose of the training course was the development and enhancement of the participants' theoretical and contextual knowledge regarding the adoption and impact assessments of water policies in their respective countries. This course therefore was designed to ensure that participants reach the following objectives:

1. Enhance knowledge and capacity development of government officials and researchers engaged on the following thematic areas:
  - Farm level decision on the adoption of water saving technology;
  - Agricultural policies affecting water management;
  - Integrating gender in water policies (basics of gender analysis and applying gender analysis in water policies);
  - Irrigation water governance (principles, assessments and effective implementation);
  - Contemporary thoughts on innovation systems and research to business approached (with case studies: raised bed and greywater treatment systems);
  - Measuring impacts of water policies (simulation and important consideration for policy formulation and policy scenarios);
  - Impact of water policies on poverty alleviation, food security and NRM.
2. Expand on key skills that empower participants to assess, better formulate and help to improve and implement better water policies.
3. Stimulate cooperation between ICARDA, JICA and participating countries through attendees, as well as regional cooperation (networking and benchmarking)

## **TARGETED AUDIENCE**

The target audience for this course is the staff of NARS and Technical Staff Officers in Iraq as part of the JICA training program in this country. However, other participants from WANA countries (Tunisia, Palestine, Lebanon, Egypt, Jordan and Yemen) involved in the water policies, natural resources management, agricultural policies and academia (universities) in their respective institutions who expressed high interest and necessity for their participation were also included in the audience. This gave an opportunity for the trainers to emphasize the importance of collaboration among policy and decisions makers and technicians on the assessment of the water policies impacts, and aspects that both need to take into account when developing and designing harmonized, effective and sustainable strategies and policies mechanisms for water management and governance in the agriculture sector.

## ORGANIZING COMMITTEE

- Mr. Charles Kleinermann, Head, ICARDA Capacity Development Unit (CDU) - ([c.kleinermann@cgiar.org](mailto:c.kleinermann@cgiar.org)).
- Dr. Boubaker Dhehibi, ICARDA – Sustainable Intensification and Resilient Production Systems (SIRPS) - ([B.Dhehibi@cgiar.org](mailto:B.Dhehibi@cgiar.org)).
- Mr. Masafumi Tamura, Technical Training officer, ICARDA CDU – ([m.tamura@cgiar.org](mailto:m.tamura@cgiar.org))

## COURSE STRUCTURE

The course instruction was organized through tutorial and practical sessions, which provided participants with hands-on experience using different data sets, software packages, modelling approaches, real case studies, policies analysis framework such SWOT (Strengthens, Weaknesses, Opportunities and Threats) and other tools (see Annex I).

The training course was designed to be interactive and participatory where discussion and debate was encouraged. The course was organized in such a way to be an invaluable opportunity for meeting, exchanging and debating current topics on water polices impacts between the participants. The training methods and day-to-day activities were based on the following framework:

- Comprehensive approach, including intensive theoretical lectures;
- Exercises in plenary and small groups to help the participants apply some of the course themes (Annex V);
- Case studies (raised bed, greywater, water governance in Tunisia, water control policies in Iraq, supplemental irrigation in Iraq, etc.);
- Extensive reading list (all topics): Designed as references for the trainees in their own research;
- Presentation of case studies by participants (for each country) on (see Annex VI):
  - Farm-level decision on the adoption of water saving technology
  - Agricultural policies affecting water management
  - Irrigation water governance
  - Applying gender in water policies
  - Impact of water policies on poverty alleviation
  - Measuring impacts of water policies

The course was designed to cover the following thematic areas/topics:

1. Farm level decision on the adoption of water saving technology.
2. Agricultural policies affecting water management.
3. Integrating and applying gender analysis into water policies.
4. Irrigation water governance: Principles, assessments and implementation.
5. Innovation systems and research to business approaches with respect to developing and disseminating new and improved water use technologies and implications for policy.
6. A framework for assessing impact of water policies on poverty alleviation and food security.
7. Impact assessment of water policies: Options and strategies in NRM.

8. Simulation of different policy scenarios and important consideration for policy formulation.

## **COURSE IMPLEMENTATION**

The course included the participation of seven countries of the region. It was attended during the entire week by 17 participants, from whom seven were women (Annex III). The course instruction was delivered by six ICARDA scientists from the Social, Economic, Policy and Research (SEPR) Team within the Sustainable Intensification and Resilient Production Systems Program (SIRPSP) at ICARDA (Annex II). Eight thematic areas were covered by this training course: (i) Farm level decision on the adoption of water saving technology; (ii) Agricultural policies affecting water management; (iii) Integrating and applying gender analysis into water policies; (iv) Irrigation water governance: Principles, assessments and implementation; (v) Innovation systems and research to business approaches with respect to developing and disseminating new and improved water use technologies and implications for policy; (vi) A framework for assessing impact of water policies on poverty alleviation and food security; (vii) Impact assessment of water policies: Options and strategies in NRM; and (viii) Simulation of different policy scenarios and important consideration for policy formulation.

The first day (Sunday) began with an overview by Dr. Boubaker Dhehibi followed by lectures provided by Dr. Aden Aw-Hassan on **Farm level decision on the adoption of water saving technology and agricultural policies affecting water management**. On the next day (Monday), Dr. Dina Najjar delivered lectures on **Gender analysis in water policies** in the morning, and Dr. Ayman Frija presented **principles and assessments of irrigation water governance**.

On the third day (Tuesday), Dr. Shinan Kassam introduced contemporary thoughts on **innovation systems and research to business approaches** followed by case studies in lower Egypt and Jordan. On the fourth day (Wednesday), Dr. Frija continued to explained **irrigation water governance and performance indicators for the assessment of groundwater policies**.

On the fifth and final day (Thursday), lectures by Dr. Yigezu A. Yigezu provided information on important considerations for policy formulation and introduced simulation of different policy scenarios followed by general discussion and evaluation in presence of JICA representative.

## **GROUP ASSESSMENT**

Given the main outcomes of the training are to understand the importance and enhancing knowledge and skills of the adoption and impact assessments of water policies in dry land areas, the selection process and assessment of the trainees was made in two steps. The first step consists on the selection, on the basis of their CV's, of the potential participants' understanding of basic adoption and impact assessments tools, water policies concepts, water policy analysis and its application. As anticipated, on average the selected participants seemed to know least in basic concepts, followed by agricultural (including water and natural resources) policies analysis tools and its application.

The post-training assessment, based on group discussions and interactions, where participants were asked to break up into country groups, reflect on the various sessions covered in the training course and present a case study linked to one thematic area covered by the course. The participants were also asked to record the most relevant information from the sessions and explain how they were going to apply this information when they return to their home. Results from this exercise showed a significant increase in the participants' understanding of the basic adoption and impact assessment of water policies concepts,

farm level decision on the adoption of water saving technology, framework for assessing impact of water policies on poverty alleviation and food security, water management governance, simulation of different policy scenarios and important consideration for policy formulation, with significant increase in the understanding of policies assessment and analysis tools/approaches and frameworks. There was a slight increase in the understanding in application of policies assessment tools. Generally, results from the groups discussion indicate that the average participants' understanding of all these sections is satisfactory.

## **EXPECTED LEARNING OUTCOMES**

The expected learning outcomes from the course are displayed in the section below:

- A- Design, implement, manage, analyze and report on research in development (RinD) in:
  - Measuring impacts of water policies
  - Adoption assessment of water saving technologies
  - Innovation systems and research approaches with respect to developing and disseminating new and improved water use technologies and implications for policy
  - Agricultural policies affecting water management
  - Irrigation water governance
  - Applying gender in water policies
  - Impact of water policies on poverty alleviation, food security and NRM
- B- Knowledge of water policies and risk assessment, integrated problem solving and systems analysis;
- C- Acquire up to date information on research and practical methods and tools in adoption and impact assessment of water policies;
- D- Allow and provide opportunity for participants to establish, expand their networks, exchange experiences and strengthening their ties with the rest of participating countries, JICA and ICARDA.

## **GENERAL COURSE EVALUATION by TRAINEES**

At the end of the training course, ICARDA offers to each participant the opportunity to provide feedback on their perception of the effectiveness of training process, format and content. This gives ICARDA valuable information from where to validate or fine-tune each training component (sessions, format, content, tec.), as well as the overall training program.

Through training evaluation questionnaires, various evaluations were carried out during the course, including a specific evaluation for each part of the course. Here we present an overview of the final evaluation. Issues considered were the topics and thematic areas of the course, the trainers and the organization, as well as general suggestions (Annex VI).

Regarding the overall methodology of the training course, most participants assessed it as excellent (69%) and 27% of participants expressed it as very good. Participants expressed their interest in giving more time for lectures with additional days for the training, more time for discussion and group work, and making the lecture both in Arabic and English.

With respect to the technical level of the topics covered in the training, 78% of the participants considered that the delivered material was very useful. Some of them commented that the varying



experiences among participants were good, and that it would have been useful to focus more on how the measure impacts of water policies using simulations under different policy scenarios.

## **CONCLUSION**

The training course on “adoption and impact assessment of water policies” had positive responses from the participants. They found it to be a very enlightening experience in many ways (personally and professionally). The satisfaction survey was returned with high scores within the scale of 1-5 (lowest to highest). Overall most participants found the course interesting and provided effective results according to its goals. The participants appreciated the interactive and participatory learning approach, especially the group activities (through the country case studies) and the opportunity to converse in their own language.

The training is regarded as a success, however not without issues or revelations. There were some comments regarding the duration of the training which was, according to the participants, too short where some participants have difficulties to fully understand the deep technical aspects of the topics in one week.

Although the training was very useful and effective, some requests for more specific training courses related to the measurement of water policy impacts using modelling and simulation scenarios were outlined by the attendees including a follow-up in some specific topics with an academic joint possible research (MSc and PhD) for development collaborative projects (Iraqi universities, JICA and ICARDA). Below is a list of the main comments and concerns of the trainees:

- More time for lectures with additional days for the training
- More time for discussion and group work
- Simulation of different policy scenarios
- Measuring impact of water policies
- Making the lecture both in Arabic and English